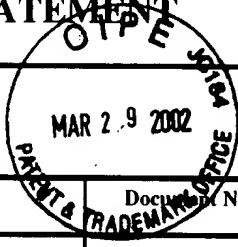


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**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation
						Yes No

**OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)**

Examiner Initial	Document Description
DKW	Bezkorovainy et al., "Iron Metabolism in Bifidobacteria," <i>Int. Dairy Journal</i> 6, 1996; 6(10):905-919
DKW	Bezkorovainy et al., "Aspects of Iron Metabolism in Bifidobacterium Bifidum Var. Pennsylvanicus," <i>Int. J. Biochem.</i> , 1983; 15(3):361-366
DKW	Topouzian et al., "Iron uptake by Bifidobacterium bifidum var. pennsylvanicus: the effect of sulfhydryl reagents and metal chelators," <i>IRCS Med. Sci.</i> , 1986, 14(3):275-276

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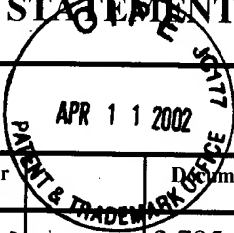
<b>EXAMINER</b>  <i>Debra H. Ware</i>	<b>Date Considered</b>  <i>10-17-02</i>
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## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date Appropriate
Stew	2,785,108	03/12/57	Hawley			
Stew	2,935,503	05/03/60	Hawley			
Stew	4,091,117	05/23/78	Mutai et al.			
Stew	4,716,115	12/29/87	Gonzalez et al.			
Stew	5,173,297	12/22/92	Vedamuthu et al.			
Stew	5,294,458	03/15/94	Fujimori			
Stew	5,340,577	08/23/94	Nisbet et al.			
Stew	5,494,664	02/27/96	Brassart et al.			
Stew	5,520,936	05/28/96	Delespaul et al.			
Stew	5,594,103	01/14/97	De Vos et al.			
Stew	5,602,109	02/11/97	Masor et al.			
Stew	5,700,590	12/23/97	Masor et al.			
Stew	5,753,614	05/19/98	Blackburn et al.			
Stew	5,776,524	07/07/98	Reinhart			
Stew	5,837,238	11/17/98	Casas et al.			
Stew	5,877,272	03/02/99	Vandenbergh			
Stew	5,902,578	05/11/99	Halpin-Dohnalek et al.			
Stew	5,902,743	05/11/99	Luchansky et al.			
Stew	5,922,375	07/13/99	Luchansky et al.			
Stew	5,952,314	09/14/99	DeMichele et al.			
Stew	5,968,569	10/19/99	Cavadini et al.			
Stew	5,972,415	10/26/99	Brassart et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation
	NONE					Yes No

EXAMINER <i>Delunsky W</i>	Date Considered <i>10-17-02</i>
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## OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initials	Document Description
Stu	American Type Culture Collection, "ATCC Number 9341," organism: <i>Micrococcus luteus</i> (Schroeter); designation: FDA strain PCI 1001 [online]; Manassas, VA [retrieved on 2002-04-03] from the Internet. Retrieved from the Internet: <URL: <a href="http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,534636,9341&amp;text=9341">http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,534636,9341&amp;text=9341</a> >; 2 pgs.
Stu	American Type Culture Collection, "ATCC Number 29425," organism: <i>Escherichia coli</i> (Migula); designation: K12 [online]; Manassas, VA [retrieved on 2002-04-03] from the Internet. Retrieved from the Internet: <URL: <a href="http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,5225109,29425&amp;text=k12">http://phage.atcc.org/cgi-bin/searchengine/longview.cgi?view=ba,5225109,29425&amp;text=k12</a> >; 1 pg.
Stu	Anderssen et al., "Antagonistic activity of <i>Lactobacillus plantarum</i> C11: two new two-peptide bacteriocins, plantaricins EF and JK, and the induction factor plantaricin A," <i>Appl. Environ. Microbiol.</i> , 64(6):2269-2272 (June 1998).
Stu	Archibald, " <i>Lactobacillus plantarum</i> , an organism not requiring iron," <i>FEMS Microbiol. Letts.</i> , 19:29-32 (1983).
Stu	Bezkorovainy, "Iron transport and utilization by bifidobacteria," In <i>Biochemistry and Physiology of Bifidobacteria</i> , Bezkorovainy et al., eds; CRC Press, Inc., Boca Raton, FL; pp. 147-176 (1989).
Stu	Bollag et al., <i>Protein Methods</i> , Wiley and Sons, Inc., New York, NY; title page, publisher's page and table of contents – 10 pgs. (1996).
Stu	Braun "Effect of consumption of human milk and other formulas on intestinal bacterial flora in infants," Chapter 23 in <i>Textbook of Gastroenterology and Nutrition in Infancy</i> , Raven Press, New York, NY; pp. 247-253 (1981).
Stu	Breed et al., <i>Bergey's Manual of Determinative Bacteriology</i> , 7 <sup>th</sup> Edition. The Williams and Wilkins Co., Baltimore, MD; title page, publisher's page, and table of contents only – 8 pages (1957).
Stu	de Ruyter et al., "Functional analysis of promoters in the nisin gene cluster of <i>Lactococcus lactis</i> ," <i>J. Bacteriol.</i> , 178(12):3434-3439 (June 1996).
Stu	Dodd et al., "Analysis of the genetic determinant for production of the peptide antibiotic nisin," <i>J. Gen. Microbiol.</i> , 136(Pt 3):555-566 (Mar. 1990).
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	<b>Filing Date:</b> June 19, 2001	<b>Group:</b> 1651

Examiner Initial	Document Description
DPW	Engelke et al., "Biosynthesis of the lantibiotic nisin: genomic organization and membrane localization of the NisB protein," <i>Appl. Environ. Microbiol.</i> , 58(11):3730-3743 (Nov. 1992).
DPW	Engelke et al., "Regulation of nisin biosynthesis and immunity in <i>Lactococcus lactis</i> 6F3," <i>Appl. Environ. Microbiol.</i> , 60(3):814-825 (March 1994).
DPW	Fuller, R., "Probiotics in man and animals," <i>J Appl Bacteriol.</i> , 66(5):365-378 (May 1989).
DPW	Fuller, R., "Probiotics for farm animals," In <i>Probiotics: A Critical Review</i> , Tannock, ed., Horizon Scientific Press, Wymondham, UK; pp. 15-22 (1999).
DPW	Green, "Case report: fatal anaerobic pulmonary infection due to <i>Bifidobacterium eriksonii</i> ," <i>Postgrad Med.</i> 1978 Mar;63(3):187-8, 190, 192.
DPW	Gibson et al., "Regulatory effects of bifidobacteria on the growth of other colonic bacteria," <i>J Appl Bacteriol.</i> , 77(4):412-420 (Oct. 1994).
DPW	Hansen, "Nisin as a model food preservative," <i>Crit Rev Food Sci Nutr.</i> , 34(1):69-93 (1994).
DPW	Ibrahim et al., "Inhibition of <i>Escherichia coli</i> by bifidobacteria," <i>J. Food Prot.</i> , 56(8):713-715 (Aug. 1993).
DPW	Immonen et al., "The codon usage of the <i>nisZ</i> operon in <i>Lactococcus lactis</i> N8 suggests a non-lactococcal origin of the conjugative nisin-sucrose transposon," <i>DNA Seq.</i> , 5(4):203-218 (1995).
DPW	Klaenhammer, "Genetics of bacteriocins produced by lactic acid bacteria," <i>FEMS Microbiol. Rev.</i> , 12(1-3):39-85 (Sept. 1993).
DPW	Kuipers et al., "Characterization of the nisin gene cluster <i>nisABTCIPR</i> of <i>Lactococcus lactis</i> . Requirement of expression of the <i>nisA</i> and <i>nisI</i> genes for development of immunity," <i>Eur. J. Biochem.</i> , 216(1):281-291 (Aug. 1993).
DPW	Kuipers et al., "Autoregulation of nisin biosynthesis in <i>Lactococcus lactis</i> by signal transduction," <i>J. Biol. Chem.</i> , 270(45):27299-27304 (Nov. 1995).
DPW	Kullen et al., "Evaluation of using a short region of the <i>recA</i> gene for rapid and sensitive speciation of dominant bifidobacteria in the human large intestine," <i>FEMS Microbiol. Lett.</i> , 154(2):377-383 (Sept. 1997).
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<b>EXAMINER</b> Duluth, Ga.	<b>Date Considered</b> 10-17-02
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Examiner Initial	Document Description
JOPE APR 11 2002	Mitsuoka et al., "Ecology of the bifidobacteria," <i>American Journal of Clinical Nutrition</i> . 1977 Nov;30(11):1799-1810.
JOPE	Mudler et al. "Bifidobacteria and bifidogenic factors," <i>Canadian Institute of Food Science Technology Journal</i> 1990;23(1):29-41.
JOPE	Muñoz et al., "Selective medium for isolation and enumeration of <i>Bifidobacterium</i> spp.," <i>Appl. Environ. Microbiol.</i> , 54(7):1715-1718 (July 1988).
JOPE	Neilands, "Molecular aspects of regulation of high affinity iron absorption in microorganisms," Chapter 3 in <i>Metal-Ion Induced Regulation of Gene Expression</i> , which is Vol. 8 of series <i>Adv. Inorg. Biochem.</i> , pp. 63-90 (1990).
JOPE	Neilands et al. "Comparative biochemistry of microbial iron assimilation," In <i>Iron Transport in Microbes, Plants and Animals</i> , Winkelmann et al., eds.; VCH mbh, Weinheim, Germany, pp. 3-33 (1987).
JOPE	Nes et al., "Biosynthesis of bacteriocins in lactic acid bacteria," <i>Antonie Van Leeuwenhoek</i> , 70(2-4):113-128 (Oct. 1996).
JOPE	Nilsen et al., "An exported inducer peptide regulates bacteriocin production in <i>Enterococcus faecium</i> CTC492," <i>J. Bacteriol.</i> , 180(7):1848-1854 (April 1998).
JOPE	O'Sullivan, "Cloning, organization and regulation of genes involved in iron metabolism in fluorescent <i>Pseudomonas</i> spp. with biocontrol potential," Ph.D. thesis, National University of Ireland, Cork; pp. 1-120 (1990).
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JOPE	O'Sullivan et al., "Tracking of probiotic bifidobacteria in the intestine," <i>Int. Dairy J.</i> , 8:513-525 (1998).
JOPE	O'Sullivan "Characterization of non-acid inhibitory characteristics of a human <i>Bifidobacterium</i> isolate against clostridia and <i>E. coli</i> ," American Dairy Science Association 1999 Annual Meeting, Memphis Cook Convention Center, Memphis, TN, June 20-23, 1999 (abstract available June 19, 1999).
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JOPE	Oyarzabal et al., "In vitro fructooligosaccharide utilization and inhibition of <i>Salmonella</i> spp. by selected bacteria," <i>Poult Sci.</i> , 74(9):1418-1425 (Sept. 1995).

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Examiner Initial	Document Description
JSW	Supard et al., "Biology of the bifidobacteria," <i>Bacteriol Rev.</i> , 37(2):136-165 (June 1973).
JSW	Stetlow, et al., "Aberrant crypts in human colonic mucosa: putative precancerous lesions," <i>J Cell Biochem Suppl.</i> 1992;16G:55-62.
JSW	Rammelsberg et al., "Antibacterial polypeptides of <i>Lactobacillus</i> species," <i>J. Appl. Bacteriol.</i> , 69:177-184 (1990).
JSW	Resnick et al., "Assessment of bifidobacteria as indicators of human fecal pollution," <i>Appl Environ Microbiol.</i> , 42(3):433-438 (Sept. 1981).
JSW	Rossi et al., "Improved cloning vectors for <i>Bifidobacterium</i> spp.," <i>Lett. Appl. Microbiol.</i> , 26(2):101-104 (Feb. 1998).
JSW	Sambrook et al., <i>Molecular Cloning: A Laboratory Manual</i> , Cold Spring Harbor Laboratory Press, table of contents and title page; 26 pages (1989).
JSW	Sanders, "Probiotics," <i>Food Technol.</i> , 53:67-77 (1999).
JSW	Sasaki et al., "Enhanced resistance of mice to <i>Escherichia coli</i> infection induced by administration of peptidoglycan derived from <i>Bifidobacterium thermophilum</i> ," <i>J Vet Med Sci.</i> , 56(3):433-437 (June 1994).
JSW	Scardovi, "Genus <i>Bifidobacterium</i> Orla-Jensen 1924, 472 <sup>AL</sup> ," In <i>Bergey's Manual of Systematic Bacteriology</i> , Vol. 2, Sneath et al., eds. ; Williams & Wilkins Co., Baltimore, MD, pp. 1418-1434 (1986).
JSW	Scardovi et al., "Deoxyribonucleic acid homology among the species of the genus <i>Bifidobacterium</i> isolated from animals," <i>Archiv fur Mikrobiologie</i> , 1970;72:318-325.
JSW	Shefet et al., "Efficacy of optimized nisin-based treatments to inhibit <i>Salmonella typhimurium</i> and extend shelf life of broiler carcasses," <i>J. Food Prot.</i> , 58(10):1077-1082 (1995).
JSW	Siegers et al., "Genes involved in immunity to the lantibiotic nisin produced by <i>Lactococcus lactis</i> 6F3," <i>Appl. Environ. Microbiol.</i> , 61(3):1082-1089 (Mar. 1995).
JSW	Singh et al., " <i>Bifidobacterium longum</i> , a lactic acid-producing intestinal bacterium inhibits colon cancer and modulates the intermediate biomarkers of colon carcinogenesis," <i>Carcinogenesis</i> . 1997 Apr;18(4):833-41.

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Examiner Initial	Document Description
Stew	Steen et al., "Characterization of the nisin gene as part of a polycistronic operon on the chromosome of <i>Lactococcus lactis</i> ATCC 11454," <i>Appl. Environ. Microbiol.</i> , 57(4):1181-1188 (April 1991).
Stew	Stevens et al., "Nisin treatment for inactivation of <i>Salmonella</i> species and other gram-negative bacteria," <i>Appl. Environ. Microbiol.</i> , 57(12):3613-3615 (Dec. 1991).
Stew	Torres et al., "Haem iron-transport system in enterohaemorrhagic <i>Escherichia coli</i> O157:H7," <i>Mol. Microbiol.</i> , 23(4):825-833 (Feb. 1997).
Stew	United States Department of Health & Human Services, "Nisin preparation: affirmation of GRAS status as a direct human food ingredient," <i>Federal Register</i> , 53(66): 11247-11251 (Apr. 1988).
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Stew	Woese et al., "Bacterial evolution," <i>Microbiol Rev.</i> 1987 Jun;51(2):221-71.
Stew	Yamauchi et al., "Antibacterial activity of lactoferrin and a pepsin-derived lactoferrin peptide fragment," <i>Infect. Immun.</i> , 61(2):719-728 (Feb. 1993).
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